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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,126	09/08/2003	Julin Wan	02307Z-132710US	9694

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EXAMINER	
LOPEZ, CARLOS N	
ART UNIT	**PAPER NUMBER**
1731	

DATE MAILED: 02/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/658,126	WAN ET AL.	
	Examiner	Art Unit	
	Carlos Lopez	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *21-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/17/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-20 in the reply filed on 11/15/04 is acknowledged. The traversal is on the ground(s) that "The Examiner's reasoning that the product can be made by pyrolyzing a preceramic polymer is incorrect. Applicants' Example shows that the product itself is unique, demonstrating a creep rate that is significantly lower than that of any published creep rates for silicon nitride/silicon carbide composites at the same stress and temperature levels. This would include products made by pyrolysis."

This is not found persuasive because as noted in MPEP section 803, "For purposes of the initial requirement, a serious burden on the examiner may be prima facie shown if the examiner shows by appropriate explanation of separate classification, or separate status in the art, or a different field of search as defined in MPEP § 808.02." Since applicant has not rebutted the prima facie shown by appropriate showing or evidence as noted in MPEP 803, except for the argument noted above, applicant's argument is found unpersuasive.

The requirement is still deemed proper and is therefore made FINAL.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claimed limitation that the powder mixture consist essentially of particles less than 100 nanometers in diameter and the limitations of step b as recited in claim 1 are not provided with antecedent basis by the specification.

It is also noted that step "a" of claim 1 requires mechanically activating a powder mixture. Step "b" of claim 1 requires the powder being activated

Additionally, the claimed charge ratio recited in claim 20 is not provided with antecedent basis in the specification.

Priority

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application); the disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

Currently, the limitations of claim 1 such as "at most 1% by weight of metal oxide densification aid, and "powder mixture consisting essentially of particles less than 100 nanometers in diameter" fail to be supported by the provisional application for which applicant claims priority to. Hence, the filing date of the instant application is deemed as 9/8/03.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. Step "a" of claim 1 activates a powder mixture. Step "b" of claim 1 recites consolidating "said powder mixture". It is unclear if the phrase "said powder mixture" in step "b" refers to the powder mixture that has been activated by step "a" or the powder mixture that is used in step "a". The phrase "said powder mixture" in step b fails to distinctly point out which powder mixture is being referred to.

The same deficiency is found in claims 4-11, it is unclear if in reciting the phrase "said powder mixture", applicant is referring to the powder mixture being used in step "a" or an activated powder mixture.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 4-8, 11-18 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,7, 10-19,25, and 28-36 of copending Application No. 10/773,758 ('758). Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claim 19 of '758 discloses a dense composite of silicon nitride, boron nitride and silicon carbide having crystals less than 100 nanometers and containing 0 to 1% by weight of a metal oxide densification aid produced by a two step process comprising:

1) Mechanically activating a powder mixture of silicon nitride, silicon carbide and boron nitride; and

2) consolidating the powder mixture into a continuous mass by passing an electric current through the powder mixture to achieve a fused silicon, boron and carbide mass comprised of crystals less than 100 nanometers in diameter.

Claims 1 and 19 of '758 fails to disclose the particle size of the powder mixture being activated. However, it is obvious to a person of ordinary skill in the art that the powder mixture, used to form a consolidated mass having of crystals less than 100 nanometers, would consist of particles that are smaller than the crystals that they form. Hence, the claimed limitation of having the powder mixture less than 100 nanometers is an implied feature of claims 1 and 19.

As for claims 4-6, the activating step of claims 1 and 19 of '758 fails to disclose a densification aid; hence there is no densification aid in the powder mixture.

As for claims 7-8, claims 7 and 25 of '758 disclose the claimed volumes.

As for claims 11-14, claims 10-13 of '758 recite the claimed temperature, current, and pressures.

As for claims 15-17, claims 14-16 and 32-34 of '758 disclose the claimed densities.

As for claim 18, claims 17-18 and 35-36 of '758 disclose the claimed milling.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References A-B in PTO-892 have been cited to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carlos Lopez whose telephone number is 571.272.1193. The examiner can normally be reached on Mon.-Fri. 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571.272.1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C L 2/3/05

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